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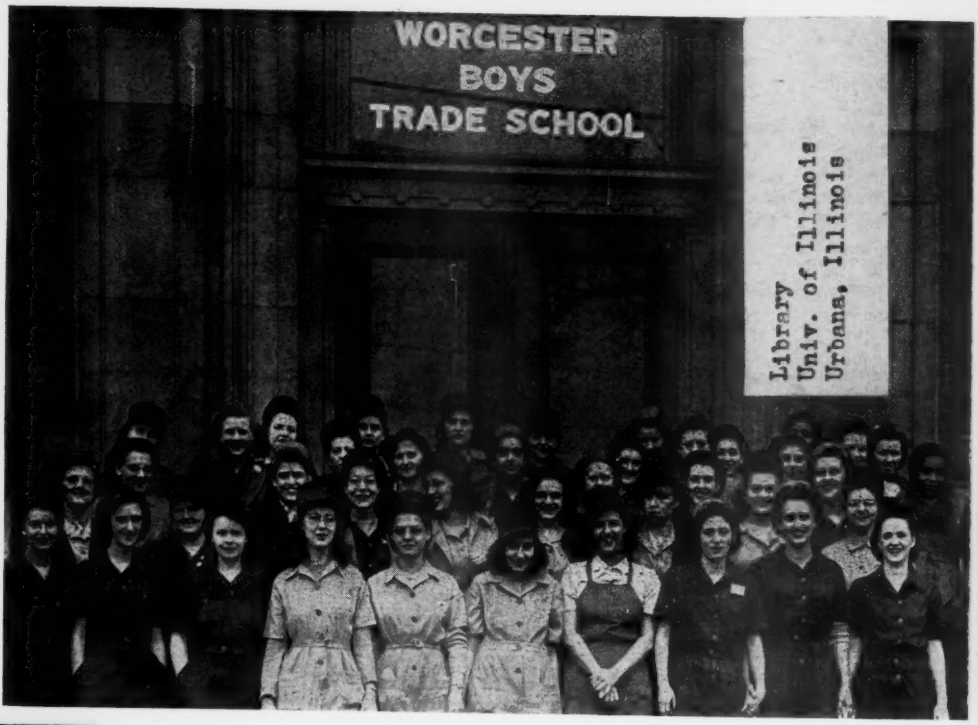

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AMERICAN VOCATIONAL ASSOCIATION, INC.

JOURNAL
AND NEWS BULLETIN

VOL. XIX February, 1944 No. 1

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MEMBER

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AMERICAN VOCATIONAL ASSOCIATION, INC.

1010 Vermont Ave., N. W., Washington, D. C.

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ARMY-NAVY "L"

UNDER the rules the Armed Forces cannot give an Army-Navy E to educational institutions, so they did the next best thing to show their appreciation of the vocational schools. Both letter and telegram were read at the AVA banquet.

DECEMBER 10 1943

TO THE AMERICAN VOCATIONAL ASSN INC

CARE DR L H DENNIS EX SECRETARY PALMER HOUSE CHICAGO

YOU MEMBERS OF THE AMERICAN VOCATIONAL ASSOCIATION, REPRESENTING THE ADMINISTRATORS, SUPERVISORS AND TEACHERS IN CHARGE OF THE EXTENSIVE TRAINING PROGRAM NOW BEING CONDUCTED IN VOCATIONAL SCHOOLS THROUGHOUT THE NATION, DESERVE THE HIGHEST PRAISE FOR THE MAGNIFICENT RESULTS YOU ARE ACHIEVING. ALMOST 6,000,000 MEN AND WOMEN IN WAR PRODUCTION, INCLUDING CIVILIAN AND ENLISTED PERSONNEL OF THE ARMED FORCES, HAVE ACQUIRED THEIR SKILLS UNDER YOUR TUTELAGE AND DIRECTION. THEY ARE HELPING TO BUILD AND MAINTAIN OUR SHIPS, AIRCRAFT, TANKS AND ORDNANCE, THUS STRENGTHENING OUR WAR MACHINE AND KEEPING IT AT PEAK COMBAT EFFICIENCY. THIS EVER-INCREASING RESERVOIR OF TRAINED WORKERS IS A TRIBUTE TO THE ABLE GUIDANCE OF YOUR ASSOCIATION. YOUR EFFORTS ARE MAKING AN INESTIMABLE CONTRIBUTION TO THE VICTORY OF OUR CAUSE.

C H WOODWARD, REAR ADMIRAL USN, CHIEF OF THE INCENTIVE DIVISION

WAR DEPARTMENT

War Department General Staff
Organization and Training Division G-3
Washington

9 December 1943.

Dr. L. H. Dennis, Executive Secretary
American Vocational Association, Inc.
Palmer House
Chicago, Illinois

Dear Mr. Dennis:

It is with a deep sense of pride as well as appreciation that the War Department acknowledges the contribution of the Nation's public vocational schools as summarized in the report on training service which your association recently provided.

We are happy to record our appreciation of the program of public school vocational education which has been initiated and implemented so patriotically and intelligently through the membership of the American Vocational Association.

Sincerely yours,

RAY E. PORTER
Major General
Assistant Chief of Staff, G-3

AT THE SPEAKERS' TABLE, A.V.A. WAR WORK CONFERENCE BANQUET IN CHICAGO

The JOURNAL and NEWS BULLETIN *of the*
American Vocational Association, Inc.
Volume XIX • February, 1944 • Number 1

WAR WORK CONFERENCE OVERVIEW

NEITHER flu nor overdue trains nor five below weather prevented nearly 2,500 delegates, members of the American Vocational Association, from keeping their appointments with the War Work Conference held at the Palmer House and Morrison Hotel in Chicago December 15 to 17, 1943.

Shifts in war training, veteran training, vocational-technical training, area vocational schools, the war food production program, work-study plans, teacher shortages, and related issues dominated 4 general and 48 section meetings. Rooms packed to standing heard speakers on agricultural education, business education, home economics education, industrial arts education, industrial education, occupational information and guidance, part-time education, and vocational rehabilitation.

In special conferences for school administrators vocational and other educational leaders exchanged views on problems of common concern.

Many Exhibits

Despite wartime attrition the exhibits proved unusually extensive, varied and attractive. At the last minute one whole new aisle had to be added to accommodate the 61 exhibits ranging from shop equipment to a classroom flight trainer in which many an A.V.A. member "tried his wings."

Chicago Schools Cooperate

Chicago school personnel, from the president of the board of education to the clerks from headquarters, received the American Vocational Association members with true mid-west hospitality. Due to their unremitting labors before and during the conference, the banquet, exhibits, room arrangements, publicity and all the detail work so necessary to convention success ran with clocklike precision. To each person attending the annual banquet the Chicago Board of Education presented a copy of a special illustrated report on war training and a fresh-from-the-printer annual report which stresses the importance of vocational education.

Many Fine Messages

Robert Bowman, 19-year-old president of the Future Farmers of America, from Buttonwillow, California, carried off top honors at the banquet in a brief, scintillating speech, thus proving that FFA members are as at home on the forum as on the farm. His report of the FFA war record in upping production, war savings, salvage and manpower challenged his elders. "More than 104,000 FFA members," he told the A.V.A., "are in the Armed Forces."

Members were also stirred to look ahead by Carl A. Gray, President, Grenby Manufacturing Company, and author of the so-called Gray plan. "I am not unmindful that our first job is to win this war," he said in an address quoted at length elsewhere in this issue, "but I believe those who say 'let's win the war first,' in an effort to postpone planning, are suffering from intellectual

AT THE SPEAKERS' TABLE, A.V.A. WAR WORK CONFERENCE BANQUET IN CHICAGO

myopia." Inviting educators to action, he added, "We can never raise ourselves to a level from which we can appraise gadgets for what they are, making them our servants, rather than our masters, unless we have true leadership from our theologians and our educators."

Vocational-Technical Institutes Discussed

Two hundred vocational-technical centers offering terminal training two years beyond vocational school would not be too many, according to L. J. Fletcher, director of training, Caterpillar Tractor Company. He spoke at the section on future developments in vocational industrial education. Industry, he declared, could use 60,000 technical institute graduates per year and many more American technicians will be needed to develop the vast untapped resources of the earth when the war ends. At this same session J. O. Keller, assistant to the president, Pennsylvania State College, pointed out that four groups are interested in the technician field and should cooperate in creating a balanced service to youth; they are the present technical institutes, engineering colleges, junior colleges and vocational schools.

The War Work Conference spent fully as much time on where vocational education is going as it did on "where it is at." What vocational education will do about training 30,000,000 plus veterans and war industry workers posed a question common to many sections. Hearings on the Thomas Bill for veteran training coincident with the Conference stimulated discussion which finally crystallized in the resolution quoted below. At a luncheon session U. S. Commissioner of Education John W. Studebaker stressed the importance of overhauling and simplifying state education machinery in order to make it easier for the Federal Government to use state educational organizations for veteran and other educational aid. Only a few states, he warned, now have state boards of ed-

AT JOINT LUNCHEON WITH SCHOOL ADMINISTRATORS

Left to right: Fred A. Smith, president, A.V.A.; U. S. Commissioner of Education John W. Studebaker; Vernon L. Nickell, State Superintendent, Illinois; Carl A. Gray, president, Grenby Manufacturing Company; William H. Johnson, Superintendent, Chicago; L. H. Dennis, executive secretary, AVA.

ucation with powers truly comprehensive. Where the Federal Government must deal with four, five, or more boards, the problem becomes so complex that the Federal Government tends to bypass the state authorities, going directly to the community or college.

For the agricultural education section meeting Dr. Frank W. Lathrop, U. S. Office of Education, listed ten problems or trends calling for research to insure proper handling. Many of his proposals were recommended for immediate study. Need of area schools to train service workers, such as plumbers and electricians, for farm regions was one of the trends he cited. "Area schools" was a phrase on many lips. Michigan and New York representatives reported postwar plans for area industrial education schools. Conference members seemed determined not only to bring vocational education within reach of all American boys and girls but to locate and consolidate and enrich vocational training to meet the needs of an America in which "unskilled labor as a classification is fast disappearing."

New Officers Elected

John A. McCarthy, Assistant Commissioner of Education and State Director for Vocational Education in New Jersey, was elected President of the American Vocational Association for the coming year. Charles W. Sylvester, Director for Vocational Education in the city of Baltimore, Maryland, was reelected A.V.A. Treasurer for another year. George H. Fern, State Director for Vocational Education in Michigan, was elected A.V.A. Vice-President for a term of three years, representing the field of industrial education. Claud M. Andrews, State Supervisor of Vocational Rehabilitation in Florida, was reelected for another three-year term as A.V.A. Vice-President, representing the field of Vocational Rehabilitation.

F.F.A. Record

Immediately after the declaration of war on December 8, 1941, the Secretary of Agriculture, Claude R. Wickard, asked the people to produce as much food as possible and declared that "food will win the war and write the peace." In compliance with this the members of F.F.A. increased their production 17 per cent within the next year.

In 1943 members of this organization have sent $23,000,000 worth of dairy products, meat, eggs, and fiber into the food basket of the world for shipment to our forces fighting overseas. This is an increase of 30 per cent since 1941 and was made with a smaller membership.—ROBERT BOWMAN, *President, Future Farmers of America.*

State Vocational Directors and the National Council of City Administrators of Vocational Education and Industrial Arts and Trade School Principals held meetings in advance of the War Work Conference. Ralph H. Woods, State Director of Vocational Education in Kentucky, was elected president of the National Association of State Directors of Vocational Education; Howard A. Campion, Los Angeles, was elected president of the City Directors and Trade School Principals group.

Resolutions

The following resolutions were adopted at the annual meeting of the House of Delegates:

Whereas: Since the vocational rehabilitation program has been separated from the United States Office of Education and established as a new division of the Social Security Agency, the various State Boards for Vocational Education are now compelled to deal

with two separate agencies in the field of vocational training, and

Whereas: Vocational training is one of the most important phases of any sound vocational rehabilitation program, and

Whereas: There is a probability of duplication of payment for the same service from two Federal sources, (1) by reimbursement from regular Federal vocational education funds of classes in local schools, and (2) from Federal rehabilitation funds for tuition of vocational rehabilitation clients enrolled in the same classes; therefore be it

Resolved: That the national administration of the civilian vocational rehabilitation program be returned to the vocational division of the United States Office of Education

* * *

Whereas: The vocational schools of America have carried out during the past three years the most gigantic task of vocational training ever undertaken by any nation in peace or war, and

Whereas: The United States Navy and the United States Army as well as industry and labor have expressed appreciation for the fine service rendered the war effort by the vocational schools, and

Whereas: Certain equipment and facilities have been made available by or through the war training programs to enable vocational education to provide a more effective program not only during but after the war; therefore be it

Resolved: That the states inaugurate effective planning for post-war programs in vocational education which will include effective training and adjustment for the returned soldiers; for the millions of war production

(Continued on page 40)

Tune in Fred Waring February 18

Recently the wartime contributions of vocational teachers were placed before Fred Waring, director of the popular "Chesterfield Pleasure Time" program. He was so impressed that he plans to pay tribute to them on the program scheduled for February 18. Ordinarily Fred Waring dedicates his programs to Army and Navy camps and stations, but on February 18 it's "hats off to the vocational teachers."

SO LISTEN IN! Chesterfield Pleasure Time, NBC, 7:00-7:15 p.m. EWT, Friday, February 18. In the Middle West it is 8:00; Mountain states, 9:00. Western states will hear the repeat program at 8:00 PWT.

Elected at the Chicago Meeting

CLAUD M. ANDREWS
Vice-President, Vocational Rehabilitation

CHARLES W. SYLVESTER
Treasurer

GEORGE H. FERN
Vice-President, Industrial Education

EDITORIALS

Win the War—Plan for Peace

EVERYWHERE in this great country of ours, thinking and planning is being directed to the post-war era. It is wise to begin to make these plans at the present time, but we must realize also we are winning the war but have not yet achieved victory. There are many long, hard days ahead, and we in the field of vocational education, who have done so much to help win the war and to produce food which is important for victory, must continue to do all of these things even in a greater measure.

JOHN A. McCARTHY
President

On the other hand, we too must direct our attention to the service which vocational education can render in the post-war period. We must balance our thinking between what we have done and what we must continue to do to win the war, and what we must plan to do after the war. Each of these main responsibilities involves a definite understanding of the objectives of each phase of activity in which the membership of the American Vocational Association is involved. We must know where we are going and how we are going to get there without waste, or lost motion. The united efforts of all groups within the American Vocational Association have made it a recognized national educational association. Let us work together to retain this national prestige.

Reconversion Training

ALREADY discharged service men and women are beginning to seek re-employment in civilian activities. Various proposals have appeared, designed to provide re-training programs for this group. There seems to be rather universal approval for such re-training service. The number to be thus served will sharply increase and will become a major national problem with the cessation of hostilities.

L. H. DENNIS

The tapering off or sudden termination of much war-production activity will bring unemployment to thousands of workers. Large numbers of workers will be temporarily unemployed for varying periods of time.

These workers will need occupational re-adjustment, re-training to assist in the conversion to peace-time activities. Many will have difficulty in adjusting themselves to new jobs requiring new skills and new techniques and will seek vocational training assistance as they did by the thousands when seeking war-production jobs. With proper Federal financial support available for the various existing state vocational programs, this civilian vocational re-training program can get under way over-night and be expanded for a wide range of occupations. Federal legislation to authorize this Federal financial assistance to the states for expanded vocational training should be enacted immediately.

"MEET NEW CONDITIONS WITH NEW IDEAS"

ROBERT J. WATT

Chairman, Federal Advisory Board for Vocational Education

AS CHAIRMAN of the Federal Advisory Board for Vocational Education, I have had an opportunity to review and study the various phases of training together with the administration of the entire program. I have concluded that we have no ground for complacency, but I am also sure that there are some good foundations already laid.

There has been a lack of understanding as to the objectives of the training programs. This, in turn, may be due to the failure of administrators in some states and local communities to have the active participation of both employers and labor in the establishment and operation of the program. The degree of confidence of labor and management in the present program, as well as those planned for the post-war period, is and will be in direct proportion to the willingness and effort on the part of school administrators to unite and obtain labor and management participation in the planning and operation of programs.

Labor wants a system of education which will help to establish and develop an effective economic and social democracy and to make much-needed improvement in our political democracy. Labor does not want the schools to convert the youth to the belief of labor unions. Neither do we want them to be propaganda agencies for those who are as horrified about labor unions as the old aristocracy was terrified at the rumblings of the proletariat.

The schools have a task requiring careful coordination of the education of future workers, the protection of the interests of workers already employed, and the necessity on the part of management to get production. If any one or more of these interests gets out of balance, the education of the future workers falls that much short of ideal standards. Obviously the machinery to assure balanced coordination is representation—to bring the experience of each group to meetings to advise and guide the educators responsible for educational plans and their administration. Vocational training in a vacuum is useless, but vocational training conducted in cooperation with representative advisory committees renders full value to the democracy which pays the costs and to which we are all sworn to give our best efforts.

Public vocational schools under the framework of Federal cooperation should be at the foundation of the proposed program of vocational training for servicemen. Establishment and operation of vocational schools, however, must be on a coordinated basis with the other local schools and in harmony with the needs of labor-management and the public. Training through state and local agencies using the present administrative setup should be possible at a much lower cost than if a complete new Federal agency is established.

Together, we must plan now so that every man and woman who wants to work, can get a job and do it well. By "we" I mean you members of the American Vocational Association, who have pioneered in promoting a type of education for working men and women. I mean members of organized labor, who can speak for labor as a whole, and I mean those who manage our industries to whom we look for employment oppor-

(Continued on page 36)

Connecticut Industrialist Speaks Out . . .

FOR "VO-CLASSICAL" TRAINING

CARL A. GRAY*

Vocational educators and school administrators alike applauded the following prescription for future education given at the special luncheon of the Chicago A.V.A. Conference. It comes from the author of the "Gray Plan," who knows his schools as well as he does his industry.

FOR many years those educators who preached the need for vocational training were ostracized by their own brethren. They were branded as incompetent reactionaries, lacking vision. Now the schoolmaster has had to go to school again and his first lesson has been from those he has belittled these many years. He has had to learn from those who make things—from those who know how to forge and hammer and drill. He has had to learn from those who know how to manage the work of those who forge and hammer and drill.

Our lack of skilled artisans in all fields, even for the normal demands of industry, commerce and agriculture, has been due to the emphasis which our public system of education has placed on academic training at the expense of vocational training. When I went to trade school twenty-five years ago, it was the creed of the educator that vocational training in secondary schools should be reserved for boys and girls who were mentally incapable of continuing their education in high school. Thus, to the classicist, the place of vocational training in our educational system was in the same category with those special schools which are built to care for sub-normal and mentally deficient students. Now, any thinking person knows you cannot make a good tool-maker out of human material unfit to be fashioned into a mediocre lawyer or engineer. (When I speak of vocational education, I do not mean in just the shop trade but in all fields—agriculture, commerce, industry as well.)

* President, Grenby Manufacturing Co., Plainville, Connecticut.

The Ugly Duckling

Vocational training has for years been the ugly duckling of education. And yet, vocational education not only is essential to the war effort but in normal times it is essential to the economic welfare of 90 per cent of young men and young women who have to look for jobs when through high school. It is also, or should be, the reservoir from which business and industry may draw competent employees. Much of the blame is, of course, due to false educational ideals of the parents and the lassitude of citizens and business men in the communities. They have perhaps had too little regard for what goes on inside the schoolhouse. Oh, as an academic principle, well and good enough—but business men, citizens and all groups have not taken, shall we say, the personal interest in education that it needs. I have known cases where that interest has been "not too welcome."

All must revise their concept of what education should be. The entire controversy of recent times, centering on a choice of education for life, for citizenship or for earning a living, is a phony. Education should aim at all three together, and the extent to which they are separated is itself a measure of the general confusion that exists.

There are "gremlins" who spread fear that vocational education will dominate

all other types of education in the postwar world because of the great industrial program we are in and face in the future. There are also vocational men who have been held down for many years by the classicists who now want to have their fling and dominate the educational picture because public opinion has begun to see the need of vocational education. The current chaotic contradictory statements about education which, on the one hand, suggest that only practical experience counts and, on the other hand, cry for stressing the fundamentals, meaning basic theory and not practical detail—are far, indeed, from an understanding of what is essential. Each group treats the other with mild contempt while youth suffers as a result. While I speak only as a layman, let me say that I believe the answer to some of the postwar problems facing this country is in a balanced education which includes both fundamental education and vocational education. In other words, a student will be a better citizen and broader mentally if he has been exposed to the good qualities of a "voclassical" education.

What's Wrong With Work?

For the great masses of people life is organized around work. Why should it be harmful or confining along with a basic education to expose young people to adequate vocational guidance training and understanding? A young man's or woman's interests may be kept broad and they may be left free to change their plans at any time without serious difficulty. I see no danger in appealing to or an understanding of the career motive early. The interest shown by students in those studies which they think are "practical" and the activity manifested by young people in making things all indicate that, if the adolescent boy or girl can be exposed to occupations for consideration and study, his school work can be made to improve and his interest in observing the life about him increased.

It seems to me one of the best ways to inculcate ideals of citizenship is to teach a student the practical as well as the social contribution to the community of all kinds of work he might consider. Happiness, good citizenship, earning a living, social usefulness, are bound up with a choice of vocation. Such a momentous choice should not be left to chance.

Cause of Unemployment

Back in 1939, Governor Baldwin asked me to make a study of the employment problem of the man over forty. I found in most cases the man over forty came from that group which, after the last war, never had an opportunity to get their feet on the ground or learn a trade, profession or occupation. When he came to your door for a job this man had nothing to offer that then had present value. He was just a nice fellow who needed a job. The fundamental prejudice was not entirely against men over forty, but against men over forty who had no useful training. These men had merely drifted since World War I. We expanded our program and found that, of the employable unemployed, fully one-third were young men and young women between the ages of 6 and 25, most of whom had never had a job—a real job—in their lives. Inexperienced and unable to get a job requiring experience, these were young people of whom it very well may be said, "They haven't had a chance." Many were only 9 years old when the depression started and had heard only of relief payments at home. We had the anomalous situation — jobs open and plenty of good people who wanted to work but were unequipped and who had no training, even as beginners. So we set up, with the aid of Mr. Boynton and the trade school directors, job training schools for all ages,

(Continued on page 27)

Vocational Agriculture Boys Learn . . .

"WORK" IS AN HONORED WORD

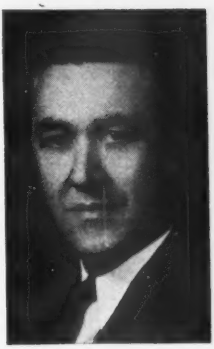
RALPH H. WOODS*

Work experience was the subject of one entire session at which the following paper was delivered. Chairman of the meeting was Harry A. Tiemann, State Director of Vocational Education, Colorado, and also chairman of the AVA's committee studying this important problem.

"WORK" should be the most honored word in the American language. Work is a blessing, not a penalty or doom. Self-expression is the greatest thing life has to offer, and work offers us the largest opportunity for self-expression. It is established fact that people learn to do what they do; one learns to work by working; to loaf by loafing. Proper work habits are learned.

Vocational education in agriculture is designed to provide functional systematic instruction for persons who are farming or who are preparing to farm. Instruction in vocational agriculture begins when boys are about 14 years of age. It is necessary to begin at least by this age in order that the boy may have a full opportunity to participate in a class in vocational agriculture throughout his four years in high school.

The number one objective in vocational agriculture is the establishment of boys in farming. If a boy is to become established in farming, he must develop some equity with which to pay his entrance into farming. The supervised farming program which boys carry on enables them to develop this needed equity and provides genuine work experience involving mechanical, managerial, and productive activities. The supervised farming program consists not only of productive enterprise projects, but improvement projects and supplementary practices, thus giving the boy a wide range of experience.



Working on the farm provides an opportunity to deal with living things and to learn the interdependence of life and the results of one's work efforts. A farm boy cannot be a "clock-watcher." If he is to be successful, he must learn early that animals must be fed, not only well, but regularly; that crops must be planted at the proper time; that one will be penalized throughout the cropping season for careless preparation of the seed bed.

The work habits and resourcefulness developed by farm boys in carrying out their supervised farming programs in vocational agriculture will be carried throughout life, and will constitute an important attribute which may be carried with the boy even though he enters a vocation other than farming. Since a 14-year-old boy coming to school does not know whether he is going to farm or do something else, it becomes the responsibility of vocational agriculture to work with all boys who come from the farm in teaching them to follow improved practices and thereby improve conditions on the farm. Any program of education should result in better living.

* State Director, Vocational Education, Kentucky.

Therefore, vocational agriculture has a big opportunity to improve conditions on farms, and, in the improving of these conditions, make it possible for boys to secure work experience and habits that will be distinct attributes throughout life.

It is a well-known fact that the rural areas rear the children not only for the farms but, to a great degree, for the cities too. All cities of 100,000 or more fail by 20 per cent or more to maintain their population by birth. The index of natural increase is, no doubt, the best indication of the number of people who will have to leave the farm and find employment in the industrial and commercial world.

In our own State of Kentucky, the index of natural increase for rural farm and rural non-farm families is 187. This means that if the farm population is to remain static, 87 will need to leave the farm. Of course, there is a great variation between counties and different sections of the state. Some few rural counties barely maintain, or fail to maintain, their population by birth, while on the other hand, we have many counties with an index of natural increase of 200 or more, and one county with an index of 236.

I should like to emphasize the point that other phases of vocational education will have to depend upon vocational agriculture to give much of the early work experience. In America there are approximately 6,000,000 farms, and these farms will provide an average of 5 years of work experience on the farm for each farm boy raised thereon. Millions of boys who will, of necessity, take up their abode and devote their efforts to occupations in the cities, will gain important work experience on the farm. There must be the closest working relationship between vocational agriculture, with its supervised farming programs, its well-equipped agricultural shops, its canneries, and other facilities, and the area trade schools. We do not have to worry about early work experience for people who are reared on the farm—they are expected to work at something from the time they are big until death or until they leave the farm.

I am not indicating that vocational agriculture and work on the farm will take care of all the work experience needed, but I am saying that it will go a long way toward starting in the right direction boys who, of necessity, have to leave the farm. We are told over and over by many of the city employers that they prefer to get boys from the farm to find jobs in the city because of the farm boys' ingenuity and willingness to work.

Dr. F. Theodore Struck

As we travel the journey through life, we meet and are influenced by many persons, and the memories that we cherish of this journey are brightened by the personalities of those rare souls we have met along the way. It was my good fortune to know and to number among my friends, Dr. F. Theodore Struck.

Kindly, industrious, soft-spoken, and sincere, Doctor Struck lived his professional life and his leisure among his friends in a manner which commended him to all men of good will.

As a teacher, supervisor, and directing head of vocational teacher education, he brought many talents to his work. He wrote a number of books and magazine articles which have enriched the field of his chosen profession; and as a pioneer in vocational education, he helped to lay the foundation stones of the vocational education program. The profession has lost one of its brilliant leaders. His life has become truly immortal not only because of what he was but also through those evidences of the building of a profession that will long endure.—Gerald Whitney.

WHAT THEY SAID AT THE CHICAGO CONFERENCE

SPACE permits quoting in the pages of this issue only a few of the addresses made at the AVA War Work Conference. From other papers submitted the following highlights have been excerpted. Many of the papers from which these paragraphs have been taken will be found printed in full in other educational journals.—Editor.

Business Education—Importance of Planning

Our situation is exactly the same as that of stores which have attributed their successful programs largely to the establishment of a Long Term Training Program in advance of immediate training needs. They do not necessarily present their program to all the heads of departments in their organization before installing it. However, the value of having such a program outlined within our own mind, as well as on paper, cannot be questioned. We do not, however, have to take it out and sell it to management any more than a training director sells it to the department heads until the time is right. They have proven that, instead of hit-or-miss shot in the arm courses which lead to nowhere, the use of a definite plan which provides for professional upgrading for the personnel for whom they are responsible acts as a guide as well as providing a measure for a sound training program.—LOUISE BERNARD, State Supervisor, Distributive Education, Virginia.

Home Economics—The Hot Lunch

That the hot lunch was an important factor in bringing about improved food habits was borne out by the improvement shown in a three-room rural school which served a complete noon meal. Before any food study was made over half the children had poor diets, while one-tenth had diets classified as good. After an intensive study of foods the proportion having poor diets was less than one-fourth. After a year of hot lunches less than one-fifth of the children had poor diets and almost half the children were eating adequate diets. Other school lunch programs yielded similar findings.

As a result of this study it was concluded that children improve their eating practices when they discover what changes they need to make, are strongly motivated to learn about foods, and have access to the right kinds and amounts of foods.—MARION BENSON, District Supervisor, Home Economics, Indiana.

Industrial Arts Education—Expansion

The Industrial Arts Education teachers in the postwar world will be called upon to develop a sound program of Industrial Arts from the pre-school up through the educational system, and to sponsor craft activities for children and adults in the community. It will take men and women of vision to do this task. Both men and women teachers will be needed to conduct the expanded Industrial Arts Education program in the postwar world, and both boys and girls will be in their classes. Women teachers will be used most in the lower grades, and men teachers in the upper grades.—LOUIS V. NEWKIRK, Director, Bureau of Industrial Arts Education, Chicago.

Trade and Industrial Education—Unskilled Unwanted

It is a sign of progress that during the past 30 years fewer and fewer of the jobs of industry are classified as unskilled labor. This situation presents a challenge, however, to those responsible for the education and training of all who look for employment to industry or business.—L. J. FLETCHER, Director of Training, Caterpillar Tractor Co.

Business Education—Package Training for Veterans

Regardless of how well we plan our postwar rehabilitation program, many returning service men will be forced to accept some type of work for which they will not be particularly fitted. They will find themselves a victim of the "back to the job" rush and they will be doing whatever comes their way in order that they may earn a living. For these men, package training can well be the solution to this unfortunate situation, because through package training these men can be prepared better to fit into the job they are holding or to qualify while on the job for work for which they have natural abilities and past experience and, in some

ONE OF THE MANY WASHBURNE TRADE SCHOOL EXHIBITS FOR AVA DELEGATES AT CHICAGO

cases, past training.—JOHN O. BURCH, Assistant Supervisor, Distributive Education, Illinois.

Trade and Industrial Education—Leaders Needed

A sound program of pre-induction training should also include the development of the future inductee's personality traits. One of the gravest needs is for young men capable of becoming good corporals and sergeants as well as for commissioned officers. Leadership has not been and probably never will be accurately defined, but, roughly speaking, one who makes a good leader is a person who can instruct others and inspire them to follow him energetically and enthusiastically. Anything that a boy can do in school to exercise and develop skill in this respect will be a distinct aid in enhancing his later usefulness in the service. The school shop provides an ideal setting for training in leadership. It is equally important that all boys, whether leaders or not, should learn how to obey. Obedience, from general to private, is one of the cardinal virtues of the soldier. Other desirable characteristics such as punctuality, application, thoroughness and dependability should be developed in all boys.—MAJOR RALPH C. WENRICH, U. S. Army.

Welding Training—In One Year

In one single year, from September 1, 1942, to September 1, 1943, the public vocational schools had trained nearly 450,000 men and women in welding occupations. Of the total number of enrollments in welding courses during that year, more than 360,000 were enrolled in electric arc welding which is utilized extensively in the construction of ships. About 250,000 enrolled in welding occupations were persons who were trained for shipyards, and private shipbuilders having contracts to build all types of ships for war purposes. During the same year, more than 32,000 enrollments were in welding courses for aircraft construction and maintenance.—HOWARD K. HOGAN, Vocational Training for War Production Workers, U. S. Office of Education.

Banquet Meeting—Another Task

I believe that you people engaged in vocational training have a golden opportunity here to do your country a great service by instilling into your teachings the sound principles of economic cooperation, which will help defeat this doctrine of "the house divided against itself." Our nation's great thinkers today advocate a program of international interdependence after the war better to insure us against further wars. I think it is time now to launch another program of interdependence within our nation, that we do not some day find ourselves at peace with the world, but at odds with ourselves.—F. M. GUNN, Manager of Works, Pullman Standard Car Company, Chicago, Illinois.

Dr. Henry S. Brunner of the Pennsylvania State College, State College, Pennsylvania, succeeds Dr. F. Theodore Struck as the Secretary-Treasurer of the Pennsylvania Vocational Association.

There's Much That Needs to Be Learned About . . .

WELDING TOMORROW

T. B. JEFFERSON*

"Well, anyway, we'll have plenty of welders when this war is over." That glib prediction so common today is punctured through and through by a distinguished authority who addressed the AVA Conference sectional meeting on Training of Welding Operators. Vocational education, according to the author, will have a large and growing welding training job to do in the post-war period.

WE ARE living in a metal age and when this war is over we will realize this even more thoroughly than we have in the past. The capacity of our steel plants has been upped. Light metals such as aluminum and magnesium have been developed to such an extent that they will find many applications in postwar products. There has been a parallel increase in our knowledge of working light metals. Magnesium, which for years has been associated in our minds as a highly inflammable material, can readily be welded now by arc, gas or resistance welding processes. In fact, the welding of magnesium is no more difficult as a result of recent developments than aluminum welding.

There are also developments that will lead to the use of welding in the plastic and glass fields. Metallic substances will be welded by arc, gas or resistance welding processes as are now commonly employed. Nonmetallic materials will probably be welded by gas welding or by processes employing high frequency heat or other forms of heat that may be used with nonconductive materials. To some of you the statement that glass and plastic materials may be welded probably seems far fetched. But remember, we are looking into the future. Many of you, however, have already welded glass but you didn't call it welding. Think back to school days to the chemistry "lab" where glass tubing was used extensively to build the apparatus required for various chemical experiments. If the tubing at hand was too short, how was it lengthened? As I remember, we used to do it by taking another piece of glass tubing and holding the ends of the two pieces in the flame of a Bunsen burner until the ends became plastic. A welded glass joint, indeed.

Three Industrial Demands

Who will use welding after the war? This question is one that is commonly asked because its answer will give a clue as to who will be the employers of welders after the war.

There will probably be three types of users of welding in our postwar world. Naturally, those who have used it before will continue to use it. The big users in these instances will be shipbuilders, tank builders—that is, builders of pressure vessels—contractors and a miscellaneous group of manufacturers of steel products.

The second classification will include those who used welding in a small way before the war but whose use of welding will be greatly expanded in the postwar world. These will be the manufacturers of motor cars, airplanes, agricultural equipment and the like.

A third group will be comprised of organizations whose product before the war did not include the use of welding but who, through war contracts, have been introduced to welding and have

* Editor, *The Welding Engineer.*

learned of its many advantages. They will have the equipment at hand with which to do welding readily, so there is no reason why they should revert to the slower, more costly methods of fabrication. Organizations that will be included are stove manufacturers, manufacturers of furniture, household appliances, office equipment, steel shelving and shop equipment.

What of Training?

Inasmuch as there will be these many users of welding after the war, the welding prospects look bright. The next question undoubtedly will be, what are the prospects of vocational training after the war?

When the war is over there will probably be about 600,000 welders in this country. The figure represents an increase of probably 300 per cent over the number of welders before the war. These craftsmen undoubtedly will be considered finished craftsmen inasmuch as they have worked for a period of time at the trade of welders. It is improbable that the immediate postwar uses of welding will require such a large number of welders.

However, I do not believe there will be a surplus for the following reasons: it is estimated about 25 per cent of the total number are women. A large majority, probably 20 per cent of the total number or 80 per cent of all the women employed as welders today, will return to other tasks, home making and other more feminine peacetime occupations. Another 20 per cent of the total are persons who for one reason or another were forced into welding during the war. This group will probably return to their previous employment. Old age and the terrific pace of wartime work will wash out some.

Another 20 per cent of the present-day welders will probably be considered unfit for further work in the trade because of a different employment set-up in the postwar world. These welders will find it necessary to take further training in order to obtain work. In some instances this condition will exist because the welder was not properly trained in the beginning. In other instances it will be because he became too mechanized in the war production program; that is, instead of broadening into an all-around welder, he specialized. It is possible during the war period he did only one job—"weld 12 in. up on bulkhead 13." Consequently tomorrow when he is called upon to do all around welding, all position welding and on different materials, he will be unable to handle the job.

From this picture I estimate that of the welders who will be employed in the postwar world probably 33 per cent of them will need further schooling in order to handle their jobs in the future. Remember, though, the fact they need training does not necessarily mean they will seek it. This, too, makes for problems. On top of this there will naturally be the needed replacements which will continue to occupy the time of our vocational schools for years to come.

In the vocational schools of the future welding will undoubtedly be a "must" course. Welding should be a part of every shop course. Just as we have in the past taught the student forging and blacksmithing or machine work in the future we shall include welding as a part of the curriculum. Welding courses should be open to girls. There are many jobs and will be many jobs in the future which can be handled satisfactorily by girls and women. Much of the welding which will be done on the airplanes of the future will be work of this classification.

Our schools in the future will undoubtedly include more extensive automotive shops as well as aircraft shops. In either of these shops, welding should naturally

(Continued on page 23)

In Technical Education Survey N. J. Industrialists Say . . .

"WE WOULD HIRE THE GRADUATES"

In its last issue the AVA JOURNAL AND NEWS BULLETIN *reported the formation of a national committee to study vocational-technical education. Now we present excerpts from an investigation among industrial spokesmen in one state on the need for vocational-technical school graduates. John A. McCarthy, assistant commissioner of education in charge of vocational education in New Jersey, and president of the AVA, asked Nicholas F. Frigiola, graduate engineer and staff member of the Bayonne Vocational and Technical High School, to interview the employers of approximately 1,000,000 workers in nearly 100 industries ranging broadly from building and chemicals to pulp and paper and textiles. Here is what he found and a few samples of what industrial leaders said to him. This material comes from the "Report of Study of Need for Vocational Technical Education," issued by the Vocational Division, New Jersey Department of Public Instruction.*

PERSONAL contacts with the key executives of many industrial firms reveal a most dire need for vocational-technical education at below college level. The feeling persists, by and large, that technical education is now attainable only by way of college training.

A few of the firms have sampled the products of vocational education on the operator and skilled trade levels and seem pleased with the results. However, the almost unanimous opinion seems to be that industry's greatest educational need lies in vocational training at the technical level, where the vocational student will receive a more broadened training in the technical aspects of the trade, and thus be fitted for the potentially large number of technical jobs which are below college level and which are definitely out of reach of the more specialized type of vocational graduate.

Opinions furnished by interviewed representatives confirm this expressed need for vocational-technical education:

"Why in God's name wasn't this training proposed sooner?"

"Would hire this type graduate on the spot."

"I wish I had had such vocational-technical education."

"You may rest assured that we are solidly behind this type of education."

The feeling prevails that vocational-technical training should continue beyond the 12th year, if the students so desire and, particularly, in the case of students below the employable age.

Heretofore the technical colleges and institutes have been the only sources for technically trained personnel. In many instances, however, college men fill routine technical jobs that could be performed by graduates of the vocational-technical level. Some of these jobs are now filled by high school graduates with years of experience on the job plus extension training.

Industrial leaders interviewed often say that potential technical employees lack the necessary technical training to such an extent that the only recourse is for industry to carry on its own training program. When asked to elaborate on these programs, they say that teaching of fundamentals of the trade, proper work habits, safety and job integrity form the prime objectives of their basic training courses. Much of this training could be given on the pre-employment

level, together with the necessary manual skills.

The Industries Recommend

1. Set up an appropriate, industries approved curriculum for each essential trade field of interest to satisfy the industrial needs in the area.

2. At the vocational-technical level, do not attempt to *specialize* in any trade field of interest but, on the contrary, offer a sound, fundamental, technical training which will effect a reasonable development of manual skills supplementing the practical trade information.

3. In order to accomplish all the objectives of these industries approved curriculums, see that each vocational-technical level institution is a truly functioning agency, which is: (a) Qualifiedly supervised; (b) equipped with a qualified personnel, practical equipment and informational material.

4. Inculcate *proper work habits* and *job integrity* which are, also, the industries' yardsticks for upgrading.

5. Make sure that the students do not graduate with a *"high and mighty air"* relative to job placement. The erroneous impression that graduates are "finished" or "experienced hands" should be corrected.

American Radiator & Standard Sanitary Corporation

A. M. Maddock, General Supervisor

"I should judge this to be a very sound and sensible plan of education for the secondary level of training. I have known of vocational education, but on the operators' level only. There is much merit to the vocational technical type of education and should prove valuable to our type firm. I am sure I speak for other members of the firm, especially those that do the hiring, when I say we would like to see young men coming to us who are acquainted with the fundamental use of tools, equipment and trade information common to the metal industry. In addition, young men who are safety-wise and willing to assume responsibility are usually in demand. You are working in a vital field, and I hope that this type of education at the high school level will be adopted generally."

John A. Roebling's Sons Co.

Leslie J. Darby, Training Director

"For God's sake, the Boards of Education are doing practically nothing to aid industry at this level. Some tall practical thinking should be done—teach labor laws—unionism is little thought in schools, when actually it should be part of a functional, fundamental course. Do not specialize, but offer broad background information. Also, *teachers must be capable* or else nothing much will be accomplished."

Aluminum Company of America

E. A. Linhart, Personnel Director

"I sincerely hope that the day is not far off when vocational-technical training will be part of all secondary level training, because it will have a twofold effect, which is applicable, in my opinion, to industry in general, namely, (1) ameliorate the present-day procedure of 'long winded' interviewing and weeding out of unfit applicants; (2) eliminate our first level of apprenticeship training, thereby leaving us with the sole job of training for *specialization* pertinent to our operations. It is to be emphasized that specialization should not be attempted in the schools."

Wright Aeronautical Corporation

Herbert G. Draesel, Supervisor of Vocational Training

"It is like a dream being realized to know that educators, at long last, are considering vocational-technical education on a nation-wide scope. This firm is highly dependent for its broad functioning on a technical knowledge which many of the jobs require and is currently offering many fundamental courses, in its own training program, and programs carried on jointly with schools in the area. We are, at present, operating on a 'pay-as-you-learn' pre-employment program. To satisfy our immediate and postwar needs, I have proposed to the management a cooperative plan to be offered high school graduates, both boys and girls, between the ages of 16 and 18, and it is expected to go into effect within the next few weeks. The courses will comprise: fundamental blue-print reading, shop operations, inspection techniques, etc. You may rest assured that the firm's vocational educational policy will be on

the increasing trend. Anything that the schools can do on a pre-employment vocational-technical level will aid us vitally in many ways."

Clifton Paper Board Co.

W. B. Koset, General Manager

"You can put me down as enthusiastically in favor of this type of education. I had never heard of it before! It is definitely sound of purpose and I would give my right arm for a young man with such training. Our firm is well established, and this picture of obtaining technically trained young people is a pleasant one, for upgrading reasons. Our firm is 90 per cent mechanized and the few workers that we have must acquire much technical training. When will I get a taste of the product of this type of education?"

Crescent Paper Box Co.

H. C. Barbin, Plant Manager

"You've got something there! Although we are a small firm, you may rest assured that vocational-technical education is essential for our supervisory jobs. We can definitely use high school graduates with technical training."

The Trenton Potteries Co.

H. A. Rydstrom, Industrial Relations, and Secretary to President

"The ceramics field is definitely in need of industrial education at this level. The secondary schools of the vocational type should inject fundamental, technical knowledge of the trade requirements, such as blue-print reading, practical mathematics, industrial chemistry, equipment handling, properties of materials, etc. Develop the ability to analyze things for themselves. Any preparation toward method study lines would greatly aid both worker and the firm."

John Zimmerman & Sons

James A. Fligg, Vice President

"I am very much interested in vocational-technical education, in view of my past experiences at Ontario Vocational School, where I taught fundamental electricity for several years. The textile field is sadly in need of vocational education. We have in our employ maintenance mechanics, who are graduates of the local vocational school, and they adapt themselves very well and we are quite pleased to have them.

"The vocational-technical level of training appeals to me and, I firmly believe, will fulfill a much needed requirement in our industry. Because little or no interest had been directed to our type of industry, we decided to furnish our local vocational school with textile equipment in order to stimulate the interest of high school graduates to this relatively well paying industry. Our dyeing phase of the operations calls for vocational-technical education in industrial chemistry."

International Harvester Co.

Mr. Birmingham, Office Manager

"I am sure that this firm is definitely in need of workers with a technical education at below college level. This need, although great in the production phase of the work, is even greater in conjunction with our distribution phase, field servicing and repair. The more fundamental technical training that can be furnished at this level, the more practical will become the schools."

Johnson & Johnson

George F. Smith, President

"To be quite frank with you, I knew very little about vocational education until recently. We are very interested in its possibilities in connection with our firm. With regard to the vocational-technical level, I can see the product of this training being readily absorbed by our industry, as technical aids to our engineers, in performing methods engineering tasks. We need young men with this training for a very definite plan of upgrading and hope that this level of technical training will be put into effect without too much delay."

R.C.A.-Victor, Camden, N. J.

G. A. Mattson, Educational Director

"Here at R.C.A. we are working hand in hand with the vocational schools. Fundamental knowledge is tendered at the vocational schools and specialized techniques and information are presented at our training school. There are many technical jobs, at below college level, and are available in a wide variety in both the research and production aspects of the work. We need young men *and women* to serve as technical research laboratory assistants, draftsmen, mechanics, supervisors, methods engineering aids, etc.

"The technical level of vocational training can definitely help to train young men and women to think along industrial lines."

Canada Charts Its Educational Future

During the present year the Canada and Newfoundland Education Association made a survey of the educational needs of Canada. The results were condensed into fifteen educational needs common to the various provinces. Several of these are in the field of vocational education. Since education in Canada is under the direction of the provinces, each provincial government has been asked to consider the C.N.E.A. report, and work out such of the recommendations as it may be possible to put into operation.

During the war, our vocational schools have been used to train war workers and members of the armed forces, and frequently the schools have been used for 24 hours a day to carry on this training. Consequently, some of the equipment has deteriorated considerably, and the Dominion government is planning to replace much of it at the conclusion of the war. For this purpose, use will be made of some of the equipment now in camps and industrial plants.

Many teachers have enlisted; in Toronto about 10 per cent of its three thousand teachers are in the armed forces. Some of the vocational teachers have had to work too hard in instructing War Emergency classes, with the result that they have suffered in health. It has been difficult to secure qualified teachers of shop work, mathematics, science and boys' physical education.

After the war there may be need of extended education for those from sixteen to eighteen years of age, and also further need for adult education, using in part the buildings and equipment no longer required for war purposes. It is expected that there will be an increase in the number of junior colleges, which will train young people for the particular sort of life and work they will probably lead and do in their respective communities. Discussion has also taken place regarding the advisability of establishing at least one polytechnic institute to give post-graduate training to vocational school graduates in Canada. The urge for establishing such an institute is coming not only from educationists but also from certain leaders in industry and business.—C. C. Goldring, *Superintendent of Schools, Toronto, Canada, at the AVA War Work Conference.*

Two Recent AVA Bulletins

An Enlarged Program of Vocational Education with Special Reference to Larger Administrative Units. Dec. 1943. Pp. 52. Prices, 40 cents each; 10 or more, 35 cents each.

The findings and recommendations of the AVA Committee on Research and Publications on the much discussed question of "area vocational schools."

Manual of Directions for use with "Evaluative Criteria for Vocational Education in Agriculture." June, 1943. Pp. 15. Prices, 1 to 9 copies, 10 cents each; 10 to 99 copies, 9 cents each; 100 or more copies, 8 cents each.

Issued to meet the demand of teachers and others using "Evaluative Criteria for Vocational Education in Agriculture" for additional directions. Will help the vocational agriculture teacher "to take stock of the existing situation."

Planks for a Postwar Program in . . .

BUSINESS AND DISTRIBUTIVE EDUCATION

B. FRANK KYKER

At the AVA Work Conference the chief of the Business Education Service, U. S. Office of Education, put down in the following one, two, three order the programs and services he believes should be developed in the postwar period.

DEFINITE programs and services should be developed in the postwar period. I shall present very brief statements covering these programs and services. These statements will be revised from time to time as suggestions and recommendations are received from ten regional and national business education associations that have appointed committees on postwar problems and plans:

Business Training

1. Programs of guidance to provide: (a) information on occupational opportunities, requirements, and training; (b) individual inventories of data essential to an evaluation of the student's assets and limitations; (c) counseling services to assist individuals in choosing vocational goals and training in harmony with the foregoing; and (d) placement and follow-up services.

2. Appropriate and effective prevocational-exploratory business courses to provide background and foundation information for those who will pursue vocational business training in the senior year of high school or on the post-high-school level.

3. Upgrading of cooperative part-time office and distributive training and the establishing of terminal cooperative training programs on the post-high-school and junior-college level.

4. Expansion of distributive-training programs, and establishment of office-training programs, to serve a larger number of businessmen and employees of minority racial groups.

5. Employment of itinerant teachers in the field of office occupations, and of a larger number of itinerant teachers in the retailing field, to meet training needs of workers in offices and stores located in the smaller towns and in sparsely populated areas.

6. Training for store and office supervisors, department heads, and managers in organization and management, in personnel relations, in supervisory procedures, and in on-the-job methods of teaching workers.

7. Professional advice and assistance to business concerns in matters pertaining to organizing, developing, and supervising in-service training programs for office or distributive workers.

8. Short, intensive, refresher courses for adults formerly employed in offices or in stores and who, after service in the Armed Forces or in war industries, wish to return to the same or to a similar type of civilian employment.

9. Short, intensive, preemployment courses for adults in the postwar period who have had no office- or store-work experience but who seek such employment and for whom there are employment opportunities in those office and retailing jobs which require only brief training periods.

10. Short, specific training courses to assist employed business workers in improving the performance of duties in their present jobs.

JAMES S. SCHOFF, THE FAIR STORE, CHICAGO, ADDRESSES AVA BUSINESS EDUCATION LUNCHEON

11. Long-range training programs for employed office and store workers, such training consisting of sequences of courses so planned that within a few years they can obtain advancement, professional status, and recognition in a specific phase of their respective occupations.

12. Assistance to state departments of education in setting up business-teacher certification requirements that provide for adequate technical and professional training and for occupational work experience of a kind and amount that will prepare vocational business teachers who can perform and teach effectively the specific skills and techniques required in the jobs for which they are giving training.

13. Institutional preparatory teacher training on a cooperative basis, with varied office- and store-work experience and related professional and technical training supplementing and complementing one another, and with directed teaching in actual retail- or office-training situations.

14. Competent local and state supervision of vocational preparatory, cooperative part-time, and adult extension training in the office and distributive occupations.

15. Adequate and effective in-service teacher-training programs in the office and the distributive occupations.

16. Course outlines, teachers' guides, and instructional materials developed in cooperation with education committees of local, state, and national retail, wholesale, and office management associations.

17. Representative local and state advisory committees in the office and distributive occupations to work with office and distributive education personnel in developing training programs suited to the needs of the communities and groups served, and with one member of each such state advisory committee being also a member of the State Advisory Committee for Vocational Education.

18. Studies and investigations on local, state, and national bases to determine (1) job requirements in the office and distributive occupations, and (2) the most effective methods of training for such occupations.

Distributive Occupations

1. Definite sales training for specific lines of merchandise, such as groceries, shoes, furniture, automobile supplies, drugs, and dairy products.

2. Specific merchandise-information courses covering new consumer products introduced after the war, as well as prewar products made of postwar materials.

3. Additional and more definite training for those employed in the distribution of such commodities as home furnishings, hardware, groceries, automobile supplies, dairy products, farm feed and supplies, and farm implements.

4. Courses in store operation and management suited to the needs of the small independent merchant.

5. Advice, assistance, and guidance to distributive businesses in solving such merchandising and management problems as bookkeeping records, merchandise display, store layout and arrangement, advertising, buying, and credits and collections.

Office Occupations

1. Widespread acceptance of, and adherence to, vocational objectives and employment standards in training for office occupations.

2. Definite, technical, vocational training for specific office occupations—such as those of bookkeeper, stenographer, typist, office-clerk, and machine operator—with provision for such related training as may be needed in producing competent office workers.

3. Assistance to local boards of education in initiating and developing adequate and effective vocational preparatory, cooperative part-time, and adult-extension office training programs, with such training based upon occupational surveys and job analyses.

4. Replacement of inadequate "day-school," preparatory, office-training classes offered in evening schools with vocational supplementary and extension training for employed office workers.

5. Advice, assistance, and guidance to office managers, department heads, and supervisors in such problems as office arrangement; planning, scheduling, and measurement of office work; office records and filing; selection and use of office supplies and equipment; and the supervision of office workers.

The development of these programs and the rendering of these services will enable business education to meet the vocational training needs in the postwar period.

Welding Tomorrow

(*Continued from page* 16)

play an important part of the training program. Vocational schools in the rural areas will find welding in great demand. Welding equipment will be a part of the shop equipment on every farm. It is only natural then that the farm boy should be properly trained.

The order is big, but when the job is done we should have a trainee that will not be a "daub and gob" type of welder but a finished craftsman capable of doing a first class job of welding, a craftsman who knows that the job is of a first class nature without the aid of an inspector, or, should the occasion arise, a craftsman capable of doing a first class job of weld inspection. The trainee of the future must be capable of welding and inspecting and capable of supervising other welders.

"Shipyard Diary of a Woman Welder," Augusta Clawson's account of her experiences in search of good training practices, has been issued as a 25-cent pocket book by Penguin Books.

Home Economics Studies Proposed

Home economics, like the other sectors of vocational education, has its eye on the future. Out of the home economics education section meetings at Chicago has come a proposal for an "investigation to determine the changes needed in reimbursed programs of home economics at the various educational levels."

Following are the reasons offered to justify the investigation: A quarter of a century has elapsed since the vocational education program was inaugurated. During that period, radical changes have taken place in American home life, in the public school curriculum and organization which affect the role of the home economics teacher, and in the scope of the home economics program. It, therefore, seems desirable that a nation-wide study be made to furnish information which can be used to evaluate present practices and policies and to determine the modifications that should be made.

Home economics leaders supplemented their general proposal with examples of studies which should offer specific contributions:

I. The requirements for teachers of home economics in programs reimbursed from vocational funds.

1. Analysis of present requirements in each institution in several states in terms of (*a*) the number of credit hours required in each academic field, in education, and in each aspect of home economics, (*b*) additional requirements, such as home management residence.

2. Discovery through wide sampling in many states what the typical responsibilities of home economics teachers are, both inside and outside the classroom.

3. Study of the data collected in various investigations of American family life which have been made in recent years to determine what the acute problems are and what contribution toward their solution might be expected from early functional home economics instruction at the secondary level.

II. The extent to which home economics students are learning procedures which contribute to democratic family living, such as planning cooperatively, carrying out plans, and evaluating progress.

1. Analysis of opportunities offered in home economics programs for student participation in deciding what to do, how to do it, and the degree of success.

2. Evaluation of the relative achievement of two groups of students, in one of which students are given maximum opportunities for participation and in the other they are given few if any such opportunities.

III. The contribution which home economics can make toward developing socially adjusted individuals.

1. An analysis of the experiences which can be provided which are likely to make students aware of and concerned about social problems.

2. Discovery of the extent to which home economics students are aware of acute social problems in their immediate environment.

IV. A study of the relation of value standards to individual behavior with respect to problems of family life.

1. Analysis of the extent to which instruction in home economics modifies students' viewpoints with respect to such decisions as the desirability of saving vs. immediate spending or a high economic level vs. having a family.

2. Determination of extent to which professed viewpoints are exemplified in behavior.

Vocational Schools Accessible to All . . .

MICHIGAN'S POSTWAR PLAN

Two states, New York and Michigan, have presented postwar plans for extension of vocational education opportunities. By means of "area schools" or centers each state proposes to broaden the vocational curriculum. Following is the heart of the first report of the Michigan Council for Vocational Education Administration on "A Proposed Plan for Postwar Public Vocational Education, and Utilization of Available War Production Worker Training Facilities and Equipment."

A QUANTITY of machinery and other equipment, furnished by the Federal Government, is now being used in the training of War Production Workers in the State of Michigan. There is already a decrease in demand for that kind of training in some areas for various reasons, and it is not too soon to plan for the use of those facilities—if they are to be made available—when that demand has been satisfied.

Machinery Problem

There is also a quantity of similar machinery and equipment which has been used by the National Youth Administration. Some of it has already been leased to certain school districts, and it is quite probable more of it will be made available if suitable plans are made to use it efficiently.

A further possibility is that additional machinery and equipment will become available for vocational training purposes at the close of the present war emergency and this, also, should be taken into consideration in planning a program.

It should be noted here that there is some difference of opinion regarding the title to such machinery and equipment now in use in the state, as to whether it lies with the State Board of Control for Vocational Education, the Federal Government, or the various school districts now having it in their possession. Obviously, this question is one that must be answered by the proper governmental agencies, but that decision may have much bearing on the type and extent of vocational training we shall have in the state of Michigan in the years to come.

If such machinery is to be left at the disposal of the State Board of Control, it is assumed that it will be the intention of the Federal authorities that it be used for vocational training purposes in the public schools of the state. If it is to be disposed of in that manner, the Michigan Advisory Council on Vocational Education Administration offers herein a plan under which it may be used most effectively.

If our educational policies and procedures are to be set up in such a way as to take full cognizance of the real vocational needs of all the people, our recommendations should be broad in scope and far-reaching in aim. The Council is unanimously in favor of this broad concept of the problem and is in favor of a program whereby the people of the state may participate in a plan which is designed to serve all areas so far as possible. If vocational education is to be made available to people throughout the state, it must be brought to them in such a way that they can take advantage of it at a minimum of expense; it must be brought as close to them as possible. Moreover, it must be so planned that these vocational schools will be prepared to cater to their changing needs as they arise.

Accessible Centers

For that reason and to accomplish that purpose, *it is proposed that vocational schools be established with centers located in such a manner as to make them readily accessible to all so far as practicable.*

Just how many of these centers will be needed, where they are to be located, or what their specific offerings are to be, are matters to be determined on the basis of needs. It is already apparent that these needs, so far as specific offerings are concerned, will not be static. On the contrary, they may be expected to change more or less rapidly as new developments in the fields of agriculture, business, homemaking, and trades and industries are introduced and others discarded. Mass production was already well-established in industry before the war, but it has received new impetus and seen even greater development as a result of that emergency. All signs point to further expansion in that direction in the years to come, and with that expansion will come a demand for a more varied program of vocational education. With the advent and development of machine processes of manufacture there has come a steady decrease in demand for the skilled craftsman and a corresponding increase for men who are prepared to operate those machines and to perform the new tasks which they create. We are now on the threshold of an era of new scientific and industrial developments in electronics, agricultural production, plastics, pre-fabricated houses, air conditioning, transportation, communications, textile manufacture, new metal alloys, selling methods, commodity distribution and others. These all will create new occupations, with a corresponding demand for workers who are prepared for them. Thus, it is clear that if these vocational schools are to satisfy the new and changing demands that are certain to come, they must be flexible in their organization and prepared to adjust their offerings accordingly.

Since the benefits to be derived by the general public from such schools would not be confined to the local areas in which they are located and operated, it is proposed that the costs of erection and maintenance be borne jointly by (1) areas to be served, (2) the state of Michigan, and (3) the Federal Government.

Tuition should be free, as it is now in our secondary schools, and provision should be made for transportation of students to and from their homes if necessary. For the benefit of needy students, funds should be available for living expenses which might be repaid by the students when they are able.

Admission Policies

It is proposed that these vocational schools be open to those who need and have the aptitude for such training opportunities as they will have to offer.

There should be reasonable and practical requirements for admission and no person should be accepted who does not possess such qualifications. It should be noted, however, that such admission requirements would differ considerably from those of the colleges; less emphasis would be placed on academic excellence and more on manual dexterity, mechanical aptitude, etc. Limitations as to age, either mental or chronological, should be of secondary importance in determining whether an individual should be accepted or not.

In order that objectives other than the vocational may not be neglected, the Council recommends that these vocational schools be open, with some exceptions, to those individuals who have completed eleven or twelve grades in the regular high schools. One exception to this might be the admission of certain individuals who have left school and been at work for not less than six months. In such cases, persons admitted in this man-

ner should be required to take certain prescribed courses in English, civics, history science, mathematics, etc., according to their individual needs.

Such a program would produce a class of superior citizens who would enter the various trades and occupations possessing an appreciation of literature, science, music, art, good citizenship, and other subjects which would prepare them for enriched living and more useful membership in society. Under this arrangement most of the cultural subjects could be offered in the existing high schools and the more intensive vocational training provided by the vocational schools. Although it would be necessary to make some adjustment in the curricula of the existing secondary schools, such a plan would not disrupt them appreciably.

In general, the period of training in these vocational schools would vary in length from a few months to three or possibly four years, depending upon the time required for adequate preparation.

The overall program should not be confined to vocational training alone. It should include guidance services which would include personal interviews from time to time with the students, placement assistance when training is completed, and follow-up supervision. It should provide a broad program of productive work experiences for them while they are in training. More and more educators are coming to recognize the need for productive work experiences as a part of public education, not only as a means of practical application of the skills and knowledge acquired but also for the values inherent in learning to give full value for the remuneration received as an employee.

The technical training should include preparation for the manufacturing, building, agricultural, distributive, home making, home management, and other trades and occupations according to the demand. Many persons do not remain in their home communities after they leave school, and for that reason the training to be offered in any such vocational school should not be confined to the occupational demands or opportunities of the local community.

For "Vo-classical Training"

(*Continued from page* 10)

18 to 60, on all types of jobs—anything, in fact, the community needed. Students who enrolled in the courses were fed up with relief jobs and many told us it was the first time in their lives there had been a personal community interest in helping them to find themselves. Trainees went to these schools on their own time, without pay, many from 11 o'clock at night to 7 o'clock in the morning, just to learn a little "know how."

If it is a fact that only 10 per cent of our young people attend college, and since our present college preparatory high school courses prepare the student only for matriculation in college, then for the 90 per cent who will seek jobs after graduation, guidance and vocational help are essential. A few hundred hours in a four-year course is not unreasonable. Lack of time or facilities are not reasons, but excuses. In most communities the cooperative school shop, school farm, or other similar programs can be worked out, if there is a will to do it. If you seek the aid of your communities, I believe you will find business men, industrialists, farmers and others willing to help.

Texas:

As part of their contribution to the war effort, Colorado City "Future Farmers" set as their goal for 1943, the production of 125,000 pounds of meat. Each member has established a goal and the chapter members have pledged themselves to produce 73,225 pounds of pork, 52,123 pounds of beef, and 5,779 gallons of milk.

Veteran Leader in Vocational Education Speaks on . .

NEW DIRECTIONS

C. A. PROSSER

The speakers' table at the AVA banquet was honored with the presence of C. A. Prosser, director of Dunwoody Institute, Minneapolis, who also addressed one of the general sessions. Members attending the banquet received a printed leaflet paying tribute to the splendid contribution made by Dr. Prosser. This was written by Dr. Homer Smith, formerly AVA vice-president, and head of the department of industrial education, University of Minnesota.

WHEN the new direction of vocational education is planned and members of the vocational movement develop a determination to take a real part in reconstruction, added or improved means of providing training services will have to be organized. The following problems justify emphasis:

1. *Organization of Area Vocational Schools.* Cursory observation will show that large numbers of people never have the advantages of vocational education because of the lack of training facilities that are near at hand. Thus the idea of establishing area vocational schools has gained considerable favor. This plan is a compromise with that of having vocational training in every town, village, and hamlet. However, the plan can probably be made to work if the areas are carefully determined; present school facilities are utilized; new facilities are provided; taxing plans are spread over the state as a whole; and attendance and tuition regulations are established in keeping with the best interests of all concerned.

2. *Expansion and Improvement of Plant Training.* The human element seems to be a most important consideration in maintaining high-speed production, high employment, and a high standard of living. Much specialized training must be given to workers who can acquire it only in the plant where correct conditions and equipment are available. Employers will have to take the lead and be assisted in improving the abilities and economic opportunities of all workers who cannot otherwise receive needed training.

3. *Extension of Public Correspondence School Service.* A larger proportion of the population than many realize have improved themselves through correspondence courses. In the present emergency the accelerated demand for more of this training clearly shows its value to serve people in remote and inaccessible places.

4. *Broadening of Part-time Training.* This war has clearly shown the inadequacy of preparation of all-around skilled mechanics. Full-speed peacetime production will no doubt show further deficiencies.

5. *Enlargement of Regular Vocational Programs.* New training needs are springing up and many old ones were never served.

a. The needs of this war have indicated weaknesses in the technical end of trade courses. Necessary technical training should be organized and given.

b. All courses in the regular vocational program should be geared to employment requirements. Instruction should be based on the duties of payroll jobs.

c. A special training program should be developed to fit the American mass production industrial plan.

(Continued on page 36)

Industrial Arts Program Aided by . . .

MANNING TABLES PLAN

R. H. ROBERTS

In the course of his AVA paper on "Wartime Emphasis on Industrial Production and Its Effect on the Industrial Arts Program" before the Industrial Arts Section, the Tulsa, Oklahoma, Area Training Supervisor of War Manpower Commission estimated the values which manning tables and job families will have upon education.

THE war has produced some vehicles which should prove to be of assistance in planning the industrial arts as well as the vocational training programs in the future. Prominent among these is the Manning Table Plan, which was first introduced during the latter part of 1942 by the War Manpower Commission, and the Selective Service System.

Among other things, the Manning Table constitutes a complete manpower inventory of the industrial plant. It lists all of the jobs in the plant, the number of persons presently employed in these jobs, the time required to train inexperienced people, the number of physically handicapped workers employed, jobs which women could do, jobs where handicapped workers can be used and several other pertinent items. Many of our larger industries have had a comparatively complete record of their manpower. But this is not true among our medium size and smaller industries. These industries have kept accurate inventory of their physical equipment, including their tools, machines, materials and the like; but have never developed such an accurate inventory of their manpower. True, they knew how many men they had on the payroll and some very general information concerning these workers, but, on the whole, this information was entirely inadequate.

Industrial Self Analysis

In preparing a Manning Table, it is necessary for the establishment to break down all the jobs in the plant in order to know what experiences, abilities and training are necessary for workers to have in order successfully to do these jobs. It is necessary for the plant to furnish a job description for each job in the plant. The job descriptions found in the Dictionary of Occupational Titles may be used if the employer feels that these descriptions are adequate. If these are not adequate the employer may prepare his own description. Many groups such as the oil industries and aircraft industries have developed an Occupational Dictionary to cover their own fields.

This ground-work having been laid and this awakening to their lack of pertinent information concerning the requirements of the jobs in their plants has prompted management in many industries to develop a complete analysis of the manpower requirements in their plants. In some instances, they have worked out a complete chart listing all jobs in the plant and outlining the educational requirements, physical requirements, previous experience required, the mathematics and science involved in the job, the lines of procedure for advancement and a complete breakdown of each job to show just what the worker must be able to do to perform the job. This makes it possible for each worker in the plant to know specifically what are the requirements of the next job higher in skill than the one he now holds. Therefore, if he plans to move up to that job

when an opening occurs, he may take some training which will help to prepare him for that job. It will also assist the personnel department of the plant to know what the exact requirements will be of each individual when he is hired. Thus, the individual who fits the job requirement will be hired rather than following the old policy of hiring the individual with some general qualifications and hope that he will be abe to do the job.

This experience of preparing a Manning Table has made management of industrial plants much more conscious of training needs, and of how training can assist them in meeting many of their manpower and production problems. It has also indicated to management that, under a carefully planned training program, the length of time required to train workers has been materially reduced. It likewise has pointed out to management the importance of much of the basic training which the industrial arts program has biven to their workers.

Job Families

The Job Family Series information which has been prepared by the Occupational Research Program of the United States Employment Service, a division of the War Manpower Commission, is another vehicle which should prove to be of assistance in the future planning of our industrial arts work. While this material has been prepared for the purpose of aiding in the placement of men in jobs, yet it has a contribution to make to training. It is not entirely a new idea or a new development. It incorporates some facts which have been known for some time by the careful students of industrial arts work, with a careful study of job requirements, and from these the material has been compiled.

What is the meaning of the Job Family?

Even the simplest occupation is made up of numerous elements. To describe any occupation accurately and adequately, it is necessary to know in rather close detail the kind and form of material handled; the tools, machines, or equipment used; the special knowledge involved; the elements performed in the job; and the abilities required of the worker in the use of the tools, in the handling of the materials and the application of this knowledge. These are the basic things which distinguish occupations from each other.

However, it is not difficult to see that no two occupations would have exactly the same elements. Therefore, in preparing to group occupations into families, it is necessary that these numerous elements and requirements be reduced to a few basic ones. In the family groupings which have been made, the following three characteristics have been taken into account:

1. Similarity in the nature of the work performed.
2. Skills and worker characteristics required.
3. The equipment and work aids used.

Example

The grouping could be made on the basis of similarity of only one of these characteristics, or it could include only two, while again it might be made to include all three. The Job Family Series which have already been published include, for the most part, those occupations in which a similarity of all three of the previously mentioned characteristics have been found. As an example of this procedure, we might choose an occupation which involves, basically, the process of melting. In this process, certain equipment and tools are used and certain worker characteristics are required in an above-average degree. This work, with these tools and equipment and other requirements, is performed upon a certain type of material. By bringing together

all occupations requiring these or similar factors in various degrees, a job family is formed.

An example of a family as outlined in the Job Family Series covering the Machine Tool Manufacturing industry is listed here in an effort to make this discussion clear. The listings are made in two columns A and B. Column A lists the key occupations. Column B lists the Related Occupations.

A-2
4-75.010 Machinist II
Machinist, Floor
4-75.140 Machine Lay-out Man
4-75.160 Job Setter II
B-2
(a) 4-78.021 Screw-Machine Operator
4-78.042 Horizontal-Boring-and Milling-Machine Operator
(b) 4-78.011 Engine-Lathe Operator I
4-78.012 Speed-Lathe Operator
4-78.021 Turret-Lathe Operator
4-78.022 Vertical-Turret-Lathe Operator
4-78.041 Vertical-Boring-Mill Operator
4-78.043 Jig-Boring-Machine Operator
4-78.071 Planer Operator II
5-84.110 Tool-Grinder Operator

The number which appears to the left of the occupation indicates the code number under which the occupation is defined in the Dictionary of Occupational Titles. By reading these definitions, one gets a definite outline of the duties performed by the workers in each occupation. In this way, we are able to see the definite relationship of one occupation to the other.

Benefits Anticipated

Some of the specific benefits which should flow from these developments follow:

1. They will assist in building a training program which will give training in families of occupations rather than in one occupation.

2. They will tend to give more spread to our industrial arts courses.

3. They will assist our high school youth in learning exactly what are the requirements of the various occupations.

4. They will outline to the learner just what job experiences he must have on each job before he is ready to be upgraded to the job in the next higher skill bracket.

5. They will set forth definitely the mathematics, science and other related work which the learner must master in preparation for the various trades. This will eliminate any doubt in the mind of the high school boy as to whether these requirements are necessary to success in the job.

To summarize some of the more general effects and contributions which this period has produced, the following should be included:

1. Management of industry has been awakened to see the values of our industrial arts training.

2. The general public has had its eyes opened to the need and value of such training.

3. School administrators and other school officials have become much more vitally interested in the industrial arts program and have been brought to see the practical values derived from it.

4. This period has awakened a new interest among the instructors to explore new areas in this field of instruction, and has furnished many more opportunities for them to learn what the exact worker needs are in industry.

5. This period has awakened the interest in, and has renewed the efforts of, members to look after the repair and maintenance of equipment in the home. This renewed interest, in turn, has influenced our industrial arts program.

6. The Manning Table and Job Family information have especially given our industrial arts departments some definite

(Continued on page 36)

A Tribute to Lindley Hoag Dennis

LINDLEY HOAG DENNIS, distinguished son of New England, native of New Hampshire,--We of THE SHIP salute you for your outstanding National Leadership in Vocational Education.

Your unreserved faith in our American Industrial Way of Life, in which Education and Industry are Inseparable--your tireless enthusiasm in promoting Vocational Education in State and Nation--your proven faith in Man and his ability as expressed in your philosophy, that Nothing is Impossible to him who wills that it be done,--all these, combined with that fine though rugged personality so characteristic to your native State, have given American Education a National Leadership that has made, and will continue to make, America the Land of Opportunity.

Your Educational, Industrial and Professional Experiences, both here in America and Abroad, supplemented by your unbounded faith in America and her public institutions of learning, have enabled you to muster the forces that have resulted in Federal Support of Vocational Education.

Lindley H. Dennis, that is Constructive Educational Leadership.

American Industry, through its Educational Representatives, THE SHIP'S CREW, has been ever mindful and appreciative of your untiring interest and cooperation that is bringing ever closer together the Educational and Industrial Interests of American Democracy.

Dr. Lindley H. Dennis, We of THE SHIP are honored for this privilege to pay tribute to you and your constructive leadership. Again --we salute you--as we wish you many more years through which to carry on to even greater heights of achievement in American Vocational Education.

Given under our hand and seal this sixteenth day of December, 1943, A.D., during the thirty-seventh Annual Convention of the American Vocational Association, held in the City of Chicago, State of Illinois.

The Ship

Charles A. Roper — CAPTAIN

D. R. McCord — DECK OFFICER

John A. Backus — SPOKESMAN

SHIP'S COMMITTEE ON RECOGNITION OF VALIANT SERVICE:

C. F. Macrae

Fred J. Kroos

John Claude

THE SHIP

THE SHIP docked early for the AVA in Chicago with a full Crew on deck.

The Order of the Day to the Crew, from Captain Roper, met with the usual hearty response by the Crew going into action.

Mate Ed Cherry, in his characteristic way, rounded up some dandy prizes from the sixty-one exhibitors and displayed them attractively at THE SHIP's booth.

Mates Jessman and Sears, without packing any pistols, collected from the exhibitors sufficient money for THE SHIP's docking expenses at Chicago.

Deck Officer Dave McCarl came through with a grand program by the famous Barber Shop Quartette and dished out some really fine prizes with his genial smile and good humor.

That mild-mannered Mate Hamlin performed like a professional in leading the group singing.

THE SHIP's Citation for outstanding service and accomplishment was awarded to L. H. Dennis and the presentation was made by Helmsman (Long) John Backus.

Drawings for prizes were made easier by the new revolving glass cage device made and presented to THE SHIP by Christian Petersen, Shop Superintendent at Lane Technical High School, Chicago.

THE SHIP's program was largely attended and the prizes were well distributed among the lucky individuals from all parts of the country.

CAPTAIN CHARLIE.

PRESENTING THE SHIP'S CITATION

(Left to right) Fred Bishop, John Claude, C. A. Roper, D. N. McCarl, L. H. Dennis, C. F. McCrae, Ed Cherry, John Backus

LIFE MEMBERS—1943

OUR A.V.A. Life Membership group continues to grow each year. This group was increased during 1943 with the addition of nineteen new A.V.A. Life Members. We now have a total of 498 A.V.A. Life Members. During the year the following Life Memberships were presented:

H. W. CARMICHAEL, Iowa State Supervisor of Trade, Industrial & Distributive Education. Presented by: Iowa Vocational Association.

J. F. CANNON, Georgia State Supervisor of Industrial Education. Presented by: Vocational Associates in Georgia.

ANDREW TRICHE, Louisiana State Supervisor of Trade and Industrial Education. Presented by: Trade school directors of Louisiana.

JOHN T. WHEELER, Professor of Vocational Education, University of Georgia, Athens, Georgia. Presented by: Teachers of vocational agriculture and staff members.

CLOVIS RAY WILKEY, Arkansas State Supervisor of Vocational Agriculture. Presented by: Vocational Education associates in Arkansas.

ROBERT T. STONER, Principal, Pennsylvania State School of Aeronautics, Harrisburg. Presented by: Associates and friends of the Pennsylvania State School of Aeronautics.

F. E. MOORE, Former Iowa State Director of Vocational Education. Presented by: Iowa Vocational Association.

ALMA KEYS, Arkansas State Supervisor of Home Economics. Presented by: Vocational Associates in Arkansas.

J. H. MOREAU, Director of Vocational Education, Little Rock, Arkansas. Presented by: Vocational associates in Little Rock.

Ten A.V.A. Life Memberships were presented at the Chicago Convention:

H. G. MCCOMB, Teacher Trainer, Trade and Industrial Education, Purdue University, LaFayette, Indiana. Presented by: Indiana State Teachers Association.

J. F. WILLIAMS, JR., Florida State Supervisor of Vocational Agriculture. Presented by: Florida Vocational Agriculture Teachers Association.

S. M. JACKSON, Louisiana State Supervisor of Agricultural Education. Presented by: Staff members.

LINSCOTT BALLENTINE, Virginia Acting State Supervisor of Trade and Industrial Education. Presented by: Peninsula Industrial Education Club and the Trade and Industrial Teachers of Virginia.

J. NORWOOD BAKER, Principal, Murrell Dobbins Vocational School, Philadelphia. Presented by: The faculty of the Murrell Dobbins Vocational School.

CARSON MOORE, Coordinator, Mayo State Vocational School, Paintsville, Kentucky. Presented by: Members of the Mayo Vocational School staff.

H. CLAY HOUCHENS, Director of Industrial Arts, Richmond, Virginia. Presented by: Department of Industrial Arts, City of Richmond.

PHILIP L. MCNAMEE, Assistant Superintendent of Schools, Chicago, Illinois. Presented by: Chicago friends in vocational and technical education.

LEO HERDEG, Assistant Superintendent of Schools, Chicago, Illinois. Presented by: Elementary school principals and district superintendents.

JAMES H. SMITH, Principal, Lane Technical High School, Chicago, Illinois. Presented by: Lane Technical High School shop teachers.

REPORT ON LEGISLATION

A NUMBER of bills have been introduced in Congress dealing with a veterans' training program. Among others discussed, and with which American Vocational Association members will do well to become familiar, are: H.R. 3846 (Barden Bill), S. 1509 (Thomas Bill), S. 1497 (McFarland Bill) and S. 1617 (referred to as the American Legion Omnibus Bill).

On January 10 and again on January 22, your A.V.A. president, John A. McCarthy, and your executive secretary represented the Association at a conference of 21 national education associations. Major higher education associations, the National Education Association and numerous other professional groups concerned were represented. Paul L. Cressman of Pennsylvania and John J. Seidel of Maryland represented the National Association of State Directors of Vocational Education. Conference sessions were devoted to discussions relating to proposed veterans' education programs and pending Federal legislation. At the conclusion of the second meeting a committee of five was appointed to represent the Conference of Associations and to make necessary legislative and other contacts. Your A.V.A. executive secretary was appointed a member of this committee.

Conferences with Senators on the problem have been held. The committee also met with representatives of the American Legion and the Veterans of Foreign Wars. It is hoped that these two influential veterans' organizations and the committee of educators may agree upon certain basic administrative procedures for education. In brief, we are trying to prevent the establishment of an additional Federal agency to handle this educational program. We are also trying to secure modification in the legislation which will permit existing State educational authorities as now constituted to be responsible for the program without an extra State agency with educational administrative responsibilities.

Another legislative development of very considerable significance to vocational education appears in proposals for disposal of surplus Government machinery and equipment. Obviously the material to be disposed of is of the widest variety imaginable and valued at many billions of dollars. Important bills dealing with distribution of surpluses include H.R. 4009 (Starnes Bill), S. 1609 (Murray Bill), and H.R. 2795.

Several conferences on this problem, which is of such great importance to the future of American education, have been held with members of Congress, representatives of the Chief State School Officers Council and with the General Manager of the Machine Tool Builders Association. Some suggestions made in one of the measures now pending before Congress were made before the bill was actually introduced.

It is essential that State and local vocational leaders begin to make an analysis of their machine tool and equipment needs. All city directors should work in close cooperation with their State Boards for Vocational Education, since the recommendations of the State vocational staff may have considerable influence in securing some of the surplus equipment with less delay when it becomes available. This may begin to take place sooner than many now anticipate.

L. H. DENNIS,
Executive Secretary.

Cornell Named to Ruch's Post

Dr. Francis Griffith Cornell has been named Chief, Research and Statistical Service, Vocational Education Division, U. S. Office of Education, succeeding the late Dr. Giles M. Ruch.

Dr. Cornell, who received the degree of Doctor of Philosophy from Teachers College, Columbia University, New York City, in 1936, for the last three years was Assistant Director of Vocational Training for War Production Workers, in charge of research and statistics.

Puerto Rico's Fine Record

Vocational leaders throughout the United States greatly admire the fine professional spirit of the vocational group in Puerto Rico. Last year the Puerto Rico Vocational Association had 480 A.V.A. members. Already this early in the year they have enrolled 295 A.V.A. members for 1944. The Puerto Rico Vocational Association is working towards a 100 per cent enrollment in the A.V.A. of all of its vocational teachers. This is a fine record.

The Puerto Rico Vocational Association has purchased four War Savings Bonds in the Fourth War Bond drive. The total value of these bonds amounts to $325. This is another evidence of the loyal, patriotic spirit of the Puerto Rico Vocational Association.

MANNING TABLES

(Continued from page 31)

aids towards developing an effective counseling and guidance program in our schools.

7. A new emphasis has been observed in the statements of objectives for our industrial arts programs.

8. Many new aids have been developed by industry, the army and navy, and some government agencies, which should prove to be of considerable value in revising our entire school curriculum and especially should become valuable instructional aids for industrial arts—some of these are: Mechanical aptitude tests, various kinds of visual aids, and written instructional materials, including those which have been prepared by the various training agencies.

PROSSER

(Continued from page 28)

d. Agricultural curricula should be revised to provide more and better training in the operation, care, and maintenance of farm mechanical equipment.

e. Homemakers will need specific training in re-establishing and rebuilding home life after the war.

f. Training must be planned and provided to meet the needs of workers in the clerical and distributive occupations.

g. When World War II comes to an end, the services of occupational information and guidance should be at a maximum during the two-year readjustment period.

WATT

(Continued from page 8)

tunities. This is our major problem, and, unless we really solve it very soon, other systems will be established to supplement or supplant the present structure of vocational schools.

You cannot rest on a Maginot Line of privilege or appropriation. You must meet new conditions with new ideas and new methods developed out of broad experience and alert ingenuity. It should be a challenge you welcome—the zest of creative enterprise.

So good luck—get ready—labor will be in your corner helping in the great task entrusted to you!

BOOK LISTINGS

Mathematics

SHOP MATHEMATICS AND SHOP THEORY, The Chrysler Manual. John M. Amiss, G. Keith Shurtleff, Hughitt G. Moltzau. New York: Harper and Brothers, 1942-43. Pp. 360. $1.60.

Prepared for use as a text with any of the standard handbooks.

ELEMENTARY MATHEMATICS FOR THE MACHINE TRADES. John H. Weir. New York: McGraw-Hill, 1943. Pp. 193. $1.60.

Mathematics essentials in concise form; theory and practice combined in successive lessons.

SHOP MATHEMATICS. Arthur A. Dick. New York: The Ronald Press Co. 1943. $2.40.

Basic and fundamental units especially suited for students pursuing vocational curriculums.

APPLIED MATHEMATICS FOR TECHNICAL STUDENTS. Murlan S. Corrington. New York: Harper and Brothers, 1943. Pp. 225. $2.20.

Written as part of Rochester Athenaeum and Mechanics Institute program for developing teaching materials of a practical nature closely related to jobs. For trade schools, factory training courses or preengineering courses.

MATHEMATICS FOR MACHINISTS. R. W. Burnham. New York: John Wiley and Sons, Inc., 1915, 2nd New Edition, revised, 1943. Pp. 247. $1.50.

Presents machine shop calculations in a simple way.

MATHEMATICS FOR THE SHEET METAL WORKER. Clayton E. Buell. New York: Pitman Publishing Corporation, 1943. Pp. 199. $2.00.

For workers who wish to advance themselves in the sheet metal and allied trades. Includes all the important branches of mathematics needed by the practical shop worker, plus some advanced work.

Shopwork

INTRODUCTORY SHOPWORK. Mack M. Jones and Aaron Axelrod. New York: McGraw-Hill, 1943. Pp. 290. $2.00.

One of the books related to pre-induction shop course recommendations from War Department and U. S. Office of Education. Emphasis on correct methods together with underlying reasons.

MACHINE SHOP PROJECTS. Roy E. Knight. Bloomington, Ill.: McKnight and McKnight, 1943. Pp. 112. $1.00.

Blueprints with operation sheets.

SLIDE RULE SIMPLIFIED. Charles O. Harris. Chicago, Ill.: American Technical Society, 1943. Pp. 250. $3.50 boxed with Slide Rule. $2.50 without Slide Rule.

World War II has taken the slide rule out of the engineer's pocket and made it the handy aid of thousands of workers. Readers who have had no mathematics beyond the eighth grade can learn the use of the slide rule through the guidance of this text.

HELICAL MILLING. C. A. Felker and H. W. Paine. Milwaukee, Wis.: The Bruce Publishing Company, 1943. Pp. 86. $2.00 cloth, $1.00 paper.

Fundamentals of the helix and helical milling arranged from simplest to advanced work.

AIRCRAFT PRODUCTION STANDARDS. Stuart Leavell and Stanley Bungay. New York: McGraw-Hill, 1943. Pp. 264. $1.50.

Aircraft information and basic knowedge required by hundreds of thousands of workers. Based on high turnover study which revealed lack of ability on part of aircraft workers.

MANUAL OF AIRCRAFT PRODUCTION. Bernard H. deSelm. New York: McGraw-Hill, 1943. Pp. 144. $1.25.

Student manual to provide basic understanding of how modern aircraft are produced.

SHIPFITTING SIMPLIFIED. L. L. Oberman. New York: McGraw-Hill, 1943. Pp. 126. $1.25.

A non-technical book for the average student.

STUDIES IN ARC WELDING. Editors, A. F. Davis and Ed. C. Powers. Cleveland: The James F. Lincoln Arc Welding Foundation, 1943. Pp. 1295. $1.50.

Work of 113 persons making exhaustive studies. 98 award papers from a collection of 409 which received awards.

PRACTICAL WOOD PATTERNMAKING. J. Robert Hall and Charles L. Webber. New York: McGraw-Hill, 1943. Pp. 188. $3.00.

Designed to help prepare the learner to become a skilled patternmaker in the shortest possible time. Includes blueprints for practice material. Numerous illustrations.

Mechanics

APPLIED MECHANICS. Raymond M. Biehler. New York: Harper and Brothers, 1943. Pp. 291. $3.25.

Another of the books developed at the Rochester Athenaeum and Mechanics Institute. Does not presuppose an extensive background in higher mathematics.

PRE-SERVICE COURSE IN MACHINE SCIENCE. Samuel H. Lebowitz, New York: John Wiley and Sons, 1943. Pp. 440.

This book was prepared as a text for the pre-induction courses in fundamentals of machines recommended by the War Department and the U. S. Office of Education.

AUTOMOTIVE MECHANICS. Clarence G. Barger. New York: The American Book Company, 1943. Pp. 342. $1.60.

Also prepared as a text for pre-induction courses in fundamentals of machines.

AUTOMOTIVE MECHANICS II. Clarence G. Barger. New York: The American Book Company, 1943. Pp. 336. $1.24.

Second semester textbook continuing work of preliminary volume.

Physics

MACHINES. Charles R. Wallendorf, Frank Stewart, George Luedke and Dominic M. Chiarello. New York: The American Book Company, 1943. Pp. 360. $1.24.

This is a basic text on the fundamentals of machines. It is also designed to aid teachers instructing in the pre-induction courses. This deals with the phases of physics related to machines and should be regarded as leading up to the two texts on Automotive Mechanics.

PRACTICAL PHYSICS. Marsh W. White, editor; Kenneth V. Manning, Robert L. Weber, R. Orin Cornett. New York: McGraw-Hill, 1943. Pp. 365. $2.50.

One of the Pennsylvania State College Industrial Series. Presents in streamlined form the major concepts of general physics, especially for use in college study and the ESMWT program.

PHYSICS, A BASIC SCIENCE. Elmer E. Burns and Frank L. Verwiebe. New York: D. Van Nostrand Co., 1943. Pp. 655. $1.80.

Aim is to provide the student with a working knowledge of the fundamental principles of physics.

Radio

RADIO TROUBLESHOOTER'S HANDBOOK. Alfred A. Ghirardi. New York: Radio and Technical Publishing Co., 1943. Pp. 744. $5.00.

Third revised and enlarged edition of this handbook keyed to the troubles of the ailing and aging radio receivers upon which America must depend until the war ends.

FUNDAMENTALS OF RADIO. L. O. Order, Kenneth A. Hathaway and Carl H. Dunlap. Chicago: American Technical Society, 1943. Pp. 351.

Textbook to be used with the pre-induction courses on fundamentals of radio. Has accompanying study outline and workbook presenting laboratory and project problems.

BASIC RADIO PRINCIPLES. Maurice G. Suffern. New York: McGraw-Hill, 1943. Pp. 271. $2.25.

Textbook designed to aid in the training of radio repairmen and technicians in a period of approximately 200 hours. By a captain in the Signal Corps, U.S.A.

RADIO. R. E. Williams and Charles A. Scarlott. New York: American Book Company, 1943. Pp. 282. $1.48.

A text for the pre-induction student, whether advanced vocational or collegiate. Represents a combination of Radio I and Radio II by the same authors, who are Westinghouse men, one a training director, the other an engineer.

PRINCIPLES AND PRACTICE OF RADIO SERVICING. H. J. Hicks. New York: McGraw-Hill, 1943. Pp. 391. $3.50.

Second and very considerably revised edition of a text originally published in 1939. Grows out of author's experience (formerly with Hadley Technical High School, St. Louis, now with the Aircraft Radio Laboratory, Wright Field) in teaching students engaged in radio service work, sound motion pictures and other students.

ELECTRICAL AND RADIO DICTIONARY. Carl H. Dunlap, Enno R. Hahn. Chicago: American Technical Society, 1943. Pp. 110. $1.00.

Revised and enlarged edition of dictionary originally issued in 1927.

RADIO MATERIEL GUIDE. Francis E. Almstead and F. R. L. Tuthill. New York: McGraw-Hill, 1943. Pp. 231. $2.00.

Standard fundamentals required of a radio operator or of any person who desires a background for studying the technical aspect of radio materiel.

UNDERSTANDING RADIO. Herbert M. Watson, Herbert E. Welch and George Eby. New York: McGraw-Hill, 1942. Pp. 603.

A guide to practical operation and theory.

Electricity

INDUSTRIAL ELECTRICITY AND WIRING. James A. Moyer, John F. Wostrel. New York: McGraw-Hill, 1943. Pp. 541. $2.75.

Third revision of a text originally prepared in 1930 and geared to the requirements of the National Electrical Code. For those in the electrical industry preparing for proficiency, not only in the underlying principles but also in the standard methods of electrical construction.

MATHEMATICS ESSENTIAL TO ELECTRICITY AND RADIO. Nelson M. Cooke and Joseph B. Orleans. New York: McGraw-Hill, 1943. Pp. 415. $2.40.

Written to meet the particular mathematics needs of electrical and radio engineering students.

BASIC ELECTRICITY FOR COMMUNICATIONS. William H. Timbie. New York: John Wiley and Sons, 1943. Pp. 603. $3.50.

Basic principles with which the worker in these fields must be thoroughly familiar both to manage routine jobs and critical emergencies.

ELEMENTARY APPLIED ELECTRICITY. L. Raymond Smith. New York: McGraw-Hill, 1943. Pp. 311. $2.00.

Revision of third edition with additional material to fit in with pre-induction course recommendations for radio and electricity made by War Department and U. S. Office of Education.

Guidance

WANTED: WOMEN IN WAR INDUSTRY. Laura Nelson Baker. New York: E. P. Dutton and Co., 1943. Pp. 215. $2.50.

Guide for women going into war factory jobs. Part one covers getting jobs, getting training, dressing for war work, etc. Part two covers main types of work for women in war industries.

VOCATIONAL INTERESTS OF MEN AND WOMEN. Edward K. Strong, Jr. Stanford University, Calif.: Stanford University Press, 1943. Pp. 745. $6.50.

Results of 19 years of investigation. Author also refers to voluminous literature in this developing field of study.

THE BIG STORE. Chase Going Woodhouse. New York: Funk and Wagnalls Co., 1943. Pp. 196. $1.50.

One of the Kitson Careers Series. A guidance aid for students interested in the department store field. Based on material gathered by the Institute of Women's Professional Relations, numerous interviews, etc.

THE MARINES IN REVIEW. Norman V. Carlisle. New York: E. P. Dutton and Co., 1943. Pp. 192. $2.50.

One of series by same author on wartime opportunities for men. Popular and illustrated.

YOUR CAREER AS A FOOD SPECIALIST. Doree Smedley and Ann Ginn. New York: E. P. Dutton and Co., 1943. Pp. 199. $2.50.

Popular guide to careers in food specialization in industry, in radio, on newspapers, on airplanes, in hospitals, etc.

HOW TO PASS A WRITTEN EXAMINATION. Harry C. McKown. New York: McGraw-Hill, 1943. Pp. 162. $1.50.

With a large part of the population of the United States engaged in taking examinations either for military or civil pursuits there should be a wide market for this book on "how to prepare for and how to take a written examination." Author says it will help on other kinds too.

THE SKY'S THE LIMIT. Charles Gilbert Hall and Rudolph A. Merkle. New York: Funk and Wagnalls Co., 1943. Pp. 195. $2.00.

Popular guide to jobs in commercial aviation and how to get them.

WARTIME OPPORTUNITIES FOR MEN. Norman V. Carlisle. New York: E. P. Dutton and Co., 1943. Pp. 205. $2.50.

Popular guide to jobs in the Army and Navy in the main but with some attention to war industries, science and agriculture.

WARTIME OPPORTUNITIES FOR WOMEN. Evelyn Steele. New York: E. P. Dutton and Co., 1943. Pp. 182. $2.50.

Companion guide to "Wartime Opportunities for Men." An evaluation of military and home front occupations on the basis of need for immediate service to the nation as well as for possibilities as a permanent career.

YOUR HIGH SCHOOL RECORD—DOES IT COUNT? Robert D. Falk. Pierre, S. D.: South Dakota Press, 1943. Pp. 124. $2.25 with discounts for quantity orders.

The author, State High School Supervisor, asked various concerns and enterprises what value their personnel departments placed on a student's high school record. What they said plus copies of their actual personnel records comprise this unusual book which is designed to motivate the high school student in the planning and prosecution of his career.

Aviation

1000 PRE-FLIGHT PROBLEMS. W. H. Thompson and M. L. Aiken. New York: Harper and Brothers, 1943. Pp. 160. $1.20 cloth, 88¢ paper bound.

Graded problems in physics and mathematics especially selected and designed for pre-flight training.

MATHEMATICS OF FLIGHT. James Naidich. New York: McGraw-Hill, 1943. Pp. 409. $2.75.

Essential topics in secondary school mathematics required for aviation in line with pre-induction training recommendations.

BASIC AIRCRAFT CONSTRUCTION. Ross A. Peterson and Raymond E. Erickson. New York: Prentice-Hall, 1943. Pp. 204. $2.00.

"Plain facts for plane builders" is the subtitle of this condensed guide for the worker going into airplane construction.

THE WARPLANE AND HOW IT WORKS. Capt. Burr W. Leyson. New York: E. P. Dutton and Co., 1943. Pp. 224. $2.50.

A clear but not over-simplified introduction to the wide variety of military planes together with details about what makes them succeed against the Axis. Everything from guns to superchargers.

GROUP INSTRUCTOR TRAINING. Training Department, Caterpillar Tractor Co. Caterpillar Tractor Co., Peoria, Ill., 1943. Pp. 16. Free.

A brief account of group instructional methods developed by the Caterpillar Tractor Co., made available at the suggestion of the Training Within Industry Division of the War Manpower Commission. Well illustrated.

Agriculture

SUCCESSFUL POULTRY MANAGEMENT. Morley A. Jull. New York: McGraw-Hill, 1943. Pp. 467. $2.50.

Up-to-date information on poultry raising and marketing methods by the head of the poultry department, University of Maryland. Primarily for vocational agriculture students.

VICTORY BARNYARD. Paul W. Chapman. New York: Whittlesey House, 1943. Pp. 221. $2.00.

A book of value to the vocational teacher because it is designed to help the industrious householder, whom he is trying to teach to shift from golf to the raising of eggs, milk, poultry and meat. The author, dean, college of agriculture, University of Georgia, has some helpful suggestions on gardening, canning and deep freeze.

Drawing and Blue Prints

BLUE PRINT READING. D. E. Hobart. New York: Harper and Brothers, 1943. Pp. 57 plus numerous plates.

Designed to shorten the time which the student or war worker needs in order to learn to read blue prints of machine drawings.

FREEHAND DRAFTING. Anthony E. Zipprich. New York: D. Van Nostrand Co., 1943. Pp. 149. $1.75.

Second and enlarged edition of this text and problem book of engineering sketching originally issued in 1924.

PRACTICAL PERSPECTIVE DRAWING. Philip J. Lawson. New York: McGraw-Hill, 1943. Pp. 215. $2.75.

Fundamental principles which can be applied anywhere. Has been arranged for reference purposes as well as for a textbook.

WAR WORK

(*Continued from page 6*)

workers who may need additional training or retraining for peace-time occupations; and for all those who will face readjustments in family life.

* * *

Whereas: New skills will be needed to enable returned service men to enter gainful peacetime employment, and

Whereas: The State Boards for Vocational Education of the several states and territories of Hawaii and Puerto Rico have rendered significant service in the vocational training of war workers, and

Whereas: The vocational schools have, with the aid of Federal funds provided by the Congress, much of the basic equipment, facilities and trained administrative and instructing personnel to meet the training needs of returned service men, and

Whereas: Public sentiment does not favor the establishment of duplicating training boards and bureaus either on the national or state levels; Therefore be it

Resolved: That the American Vocational Association recommend that instead of providing tuition payments to educational institutions that funds be appropriated through the United States Office of Education to be allotted to the respective states and State Boards specifically responsible for the various types of education.

* * *

Whereas: We have enjoyed at Chicago a splendid example of cordial and effective cooperation between the Chicago Convention committee and our American Vocational Association Committee in carrying out convention preparations, therefore be it

Resolved: That we express our sincere thanks to this Convention Committte, to all its active sub-committees and to the Illinois Vocational Association for their work in behalf of this meeting.

* * *

Whereas: During the past year several outstanding members of our Association have passed on; be it

Resolved: That this group assembled stand in silence for one minute in tribute to their memory.

* * *

Resolved: That we express our sincere appreciation to Dr. John W. Studebaker, U. S. Commissioner of Education, and to all members of his staff for their services in behalf of vocational education and for their contributions to the success of this Chicago A. V. A. Convention.

Respectfully submitted,

Committee on Resolutions:

Industrial—M. Norcross Stratton, Mass.; Industrial Arts—Stanley Pawelek, Maryland; Rehabilitation—A. C. Corovent, Michigan; Home Economics—Maude Williamson, Colorado; Part-Time—Dora M. Rude, Wisconsin; Business and Distributive—M. A. Browning, Texas; Guidance—Dolph Camp, Arkansas; Agriculture—William Kerr, Idaho, Chairman.

Philadelphia was selected as the site of the 1944 A.V.A. Convention.

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A.V.A. MEMBERSHIP ANALYSIS

January 31, 1944

State	November 30, 1943 *	January 31, 1944		
		Individual	Life	Total
Alabama	581	612	1	613
Alaska	1	1	—	1
Arizona	102	58	—	58
Arkansas	647	—	9	9
California	893	442	17	459
Colorado	119	109	1	110
Connecticut	257	78	2	80
Delaware	73	98	1	99
Florida	1,234	—	2	2
Georgia	1,190	1,146	8	1,154
Hawaii	—	—	—	—
Idaho	145	101	1	102
Illinois	2,506	1,185	16	1,201
Indiana	667	485	3	488
Iowa	585	476	2	478
Kansas	253	178	5	183
Kentucky	599	131	10	141
Louisiana	333	168	3	171
Maine	142	45	2	47
Maryland	330	391	13	404
Massachusetts	950	731	6	737
Michigan	370	245	8	253
Minnesota	525	155	6	161
Mississippi	673	433	1	434
Missouri	554	307	3	310
Montana	88	—	—	—
Nebraska	291	231	—	231
Nevada	56	—	—	—
New Hampshire	41	—	—	—
New Jersey	510	—	60	60
New Mexico	127	—	—	—
New York	1,612	329	135	464
North Carolina	298	565	3	568
North Dakota	90	73	—	73
Ohio	1,141	460	13	473
Oklahoma	550	525	—	525
Oregon	280	92	1	93
Pennsylvania	1,921	677	10	687
Philippines	—	—	—	—
Puerto Rico	480	295	—	295
Rhode Island	26	24	—	24
South Carolina	658	558	1	559
South Dakota	88	108	—	108
Tennessee	800	604	5	609
Texas	1,142	778	58	836
Utah	141	56	—	56
Vermont	63	53	—	53
Virginia	618	455	6	461
Washington	134	324	—	324
Washington, D. C.	134	88	9	97
West Virginia	402	208	2	210
Wisconsin	1,175	743	61	804
Wyoming	75	61	—	61
Canada	2	—	—	—
Life Memberships	14†	—	14†	14†
Totals	26,686	14,882	498	15,380

* End of Membership Year. † Deceased, discontinued or transferred.

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